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BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

FOREST INSECT INVESTIGATIONS

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TITLE

FOREST INSECT SURVEY - SEAS ON OF 1947
INYO NATIONAL FOREST, CALIFORNIA, AND ADJACENT TIMBER LANDS

by

John E. Patterson
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FOREST INSECT SURVEY
INYO NATIONAL FOREST, CALIFORNIA, AND ADJACENT TIMBER LANDS
SEASON OF 1947

Approved by:

F. P. Keen

Entomologist, In Charge

Submitted by:

John E. Patterson

John E. Patterson, Entomologist

Forest Insect Laboratory
341 Giannini Hall, U. C.
Berkeley 4, California

FOREST INSECT SURVEY
INYO NATIONAL FOREST, CALIFORNIA, AND ADJACENT TIMBER LANDS
SEASON OF 1947

FIELD EXAMINATION.

Personnel: John E. Patterson, Entomologist, Forest Insect Laboratory, Berkeley, California and F. W. Ahrenholz, Forester, U. S. Forest Service, Inyo National Forest, Bishop, California.

Date: October 18 to 24, 1947.

Methods: General ground reconnaissance; topographic viewing, and measurments of roadside plots and of established survey plots.

AREAS EXAMINED.

All of the commercial pine type of the Mammoth District of this forest. The general region covered by this survey included the following local areas:
1. Bald Mountain - Mono Mills
2. Glass Creek
3. Mammoth Lakes
4. Casa Diablo

In addition to these commercial pine stands several recreational areas were examined. These included Reversed Creek, Mammoth Lakes, Rock Creek, and Bishop Creek.

MOST IMPORTANT INSECT PROBLEMS FOUND.

Current insect activity is confined to two species of pine, Jeffrey pine and lodgepole pine. Infestations in both species are endemic with resultant damage below normal for these stands. Very little infestation of any kind was found on the recreational areas.

INSECTS RESPONSIBLE FOR PINE LOSSES IN 1946 - 1947.

During these years barkbeetles continued to be the primary agents in pine losses. Damage to Jeffrey pine was caused by the Jeffrey pine beetles (Dendroctonus jeffreyi), and the western pine engraver, (Ips emarginatus). Losses in lodgepole pine were caused by the mountain pine beetle (Dendroctonus monticolae). An incipient infestation of a needleminer (Recurvaria sp.) has persisted in the

lodgepole pine stands at Sage Hen Meadows for a number of years but has not developed aggressiveness and the damage has been slight.

CHARACTER OF THE 1946 AND 1947 BARKBEETLE INFESTATIONS.

These were definitely of an endemic character. Infestations in Jeffrey pine were scattered throughout the stands and occurred generally in single large trees widely separated. A slight concentration of infestation was noted in the Glass Creek area adjacent to logging operations which were recently shut down. Ina all other areas widely scattered infestations was the rule.
Mountain pine beetle infestations in lodgepole pine were largely confined to the stands in and around the Wet Meadows section of Bald Mountain area. They were endemic in character and the loss was subnormal.
There was very little loss in any of the recreational areas. This is a definite improvement over former status where both lodgepole pine and white pine on several of these areas suffered considerable damage from beetle attacks.

TREND OF BARKBEETLE INFESTATIONS.

Data secured from survey of the established plots, together with extensive observations made throughout the region, indicate that barkbeetle infestations during the biennium were largely static. A slight upward trend in 1947 is indicated by the data so far available but the amount of measured increase is insufficient to be significant.

INSECT LOSSES ON SAMPLE PLOTS.

Data shown in the following table summarizes barkbeetle losses for the two-year period on the sample plots surveyed.

			Number of trees killed						B/F loss per acre	
			1946			1947*				
Survey plot	Acres	Spec.	Trees	Vol.	BM	Trees	Vol.	BM	1946	1947*
Casa Diablo RD	50	JP	4		5,830	2		630	76	13
Glass Creek RD	140	JP	4		3,800	6		5,970	27	43
Craters RD	200	JP	1		240	4		2,850	1	14
Indiana SP	10	JP	1		800	1		2,190	80	219
Totals	400		10		8,670	13		11,640	22	29

(*) Partial loss only since it was not possible to secure complete loss data for this year because not all infested trees showed visible indications of attack at the time survey was made.

ESTIMATED BARKBEETLE LOSSES IN 1947.

The following estimate of the total barkbeetle loss in Jeffrey pine during 1947 is based on the measured samples and on extensive reconnaissance coverage of these stands.

Area	Timbered acreage	Volume in MBM killed	
		Loss in 1946	Loss in 1947
Mammoth	10,000	40	15
Glass Creek	8,000	216	344
Casa Diablo	5,000	10	15
Bald Mountain	12,000	120	200
Totals	35,000	386	574

INSECT CONTROL RECOMMENDATIONS.

Current insect infestations on this forest area are subnormal with resultant low timber losses. Because of this condition control directed against the present infestation is neither warranted or recommended.